



The University of Kibungo (UNIK) is hosting a Scientific Conference in **Big Data Analytics and Internet of Things (IoT)** from 13 - 14 July 2017 at Kayonza, Rwanda. The African Center of Excellence in Internet of Things at the University of Rwanda (UR) collaborates with UNIK in co-organizing and hosting the *two day pre-conference Workshop (10th-11th July) at the College of Science and Technology main campus in Nyarugenge, Kigali.*

Title of the Workshop: Data Matters: Introduction to Data Science and R Programming for Data Analytics

Objective of Workshop: Data Science is the systematic discovery of meaningful patterns in data to support decision making. Analysis of data not only requires the appropriate techniques and methods but also the right tools. One of the most powerful tools used by Data Scientists all over the world is R. R Programming Language is the most widely used language in Data Science. It is an Open Source Software and allows to integrate our own packages. It has plenty and boundless packages for all complex problems. This main objective of this workshop is enlightening the data analytics with help of R tool.

Goals of the Workshop: The goal of this workshop is to provide you the basic skills for exploration of few machine learning algorithms, interpretation of data and insights from the data with visualization, which are important for solving a range of Data Science Problems.

Key Topics covered in the Workshop:

1. Introduction to Data Science
2. Role of R language in Data Science
3. Basics of R including Data types, data frames, variable, functions, Data import/export, File Handling, etc. (Hands-On)
4. Data Exploration (Hands – On with simple examples including simple plots)
5. Decision Tree using R (Hands – On with one example)
6. Linear Regression using R (Hands – On with simple example)
7. Clustering using R (Hands –On with two examples)
8. Implementation of Classification Algorithms using R (Hands –On with simple example)
9. Time Series Analysis using R (Hands – On with examples)
10. Social Media Analysis using R (Hands – On with simple example)

Target Audiences: Students, Faculty Members, Research Scholars, Industry Professionals

Learning Outcome of the Workshop: At the end of the workshop, the participants are able to:

1. Analyse large datasets and make data driven decisions.
2. Reconnoitre knowledge and essential skills needed to address the challenges of data intensive decision-making environments.
3. Walk you through several predictive analytics techniques.

Pre-Requisite: Basic knowledge of statistics and programming languages (optional)

Other logistics related to the workshop are given below:

Number of Days	2 (Two)
Dates	July 10 th and 11 th , 2017
Expert Trainers	Dr. V. Vijayakumar & Prof. Ramesh Ragala, Vellore Institute of Technology (VIT), Chennai, India.
Rwanda co-organiser and Contacts:	1) Professor Santhi Kumaran, ACEIoT, University of Rwanda, College of Science and Technology (UR-CST), Email: hadamfr@gmail.com , siyana223@gmail.com and santhikr69@gmail.com 2) Professor Verdiana Grace Masanja, Strategic Development, Research and Innovation office, UNIK. Email: sasdri@unik.ac.rw and vmasanja@gmail.com
Venue	UR-CST, Nyarugenge Campus, Kigali
Meals and Accommodation	Participants will take care of their own travel, meals and accommodation expenses during the Workshops.
Registration	Download the registration form on http://unik.ac.rw/2017conference/index.php/committees/ fill it and send it to sasdri@unik.ac.rw copy vmasanja@gmail.com
Registration Fees	USD 25 non-residents and RWF 20,000 residents
Deadline of Registration	June 30 th , 2017

The registration fees can be paid at the following bank accounts either in USD or in RWF:

USD Account	RWF Account
Account name: Universite de Kibungo Account number: 001103800820901 Currency: USD SWIFT Code: ECOCRWRW Bank name: ECOBANK RWANDA Bank address: Plot 314, Avenue de la Paix, BP 3268, Kigali, Rwanda	Account name: Universite de Kibungo Account number: 001003800820901 Currency: RWF SWIFT Code: ECOCRWRW Bank name: ECOBANK RWANDA Bank address: Plot 314, Avenue de la Paix, BP 3268, Kigali, Rwanda